## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 4 August 2005 (04.08.2005)

**PCT** 

## (10) International Publication Number WO 2005/071512 A1

(51) International Patent Classification<sup>7</sup>: B64G 1/44, H01L 31/042

G05F 1/613,

(21) International Application Number:

PCT/EP2004/000612

**(22) International Filing Date:** 26 January 2004 (26.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): EURO-PEAN SPACE AGENCY [FR/FR]; 8-10, rue Mario Nikis, F-75738 Paris (FR).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): HAINES, James, Edward [GB/NL]; President Kennedylaan 122, NL-2343 GT Oegstgeest (NL).
- (74) Agents: DE ROQUEMAUREL, Bruno et al.; Novagraaf Technologies, 122, rue Edouard Vaillant, F-92593 Levallois Perret Cedex (FR).

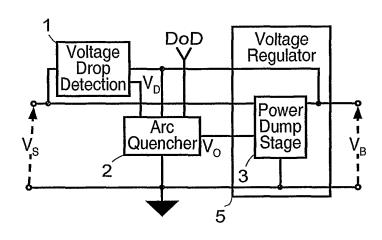
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## **Published:**

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ARC QUENCHING DEVICE FOR A SOLAR ARRAY



(57) Abstract: A device for protecting against arcing events solar array panels and control equipment supplying a main power bus, the control equipment comprising a regulator (5) for controlling a solar array voltage (Vs) and including a power dump stage (3) for shunting the solar array voltage as a function of a control signal, the device comprising a voltage drop detection circuit (1) for generating a voltage drop detection signal (V<sub>D</sub>) when a voltage drop is detected in the solar array voltage (Vs), and an arc-quenching circuit (2) comprising means for generating an output signal (V<sub>o</sub>) which is applied as the control signal to the power dump stage (3) so as to shunt said solar array voltage (V<sub>s</sub>) when a voltage drop is detected by said voltage drop detection circuit.